Idaho Spatial Data Infrastructure Investment Review

Date Submitted:	2011 Budget Request	Agency Director:	Mike Gwartney
Agency:	Dept of Admin	Project Number:	348
Program Name:	Idaho Spatial Data Infrastructure Initiative		
Program Manager (include contact information)	Gail M. Ewart, GISP, GIO, plus other GIS leaders 332-1879, gail.ewart@cio.idaho.gov		
Total Project Budget:	Year 1 $550k core state support (overall $27M/5yrs (with only $16M in additional investment)	Project Start Date:	Jan 2009
Is program currently funded? Y or N	N	Estimated End Date:	Dec 2013 to complete initial ISDI
Executive Sponsor:	Mike Gwartney, Greg Zickau, ITRMC approved		

Summary

Overall: ISDI is a combination of data and services, policies and people that form a general platform for a shared based map. Creating the SDI requires an organized approach to data development, data maintenance, and data access, all within a responsive and collaborative structure. SDI will provide accurate and reliable base data to fuel applications for decisions about the security, prosperity, health and safety of our citizens and organizations. The applicable categories are: a Applications and Software, d Database, j GIS, and p other.
This Investment: This request represents a minimum core state commitment to the Idaho Spatial Data Infrastructure Initiative approved by ITRMC in February. It contains funding for five aspects of implementing ISDI:

1) Stability to our data portal (INSIDE Idaho)
2) Seed funding for Framework data development;
3) Seed funding for Regional Resource Centers
4) Modest resources for outreach and communications in a diverse statewide community, and
5) Training development with subsidies for trainees for our lead training facility (ISU's GISTReC).

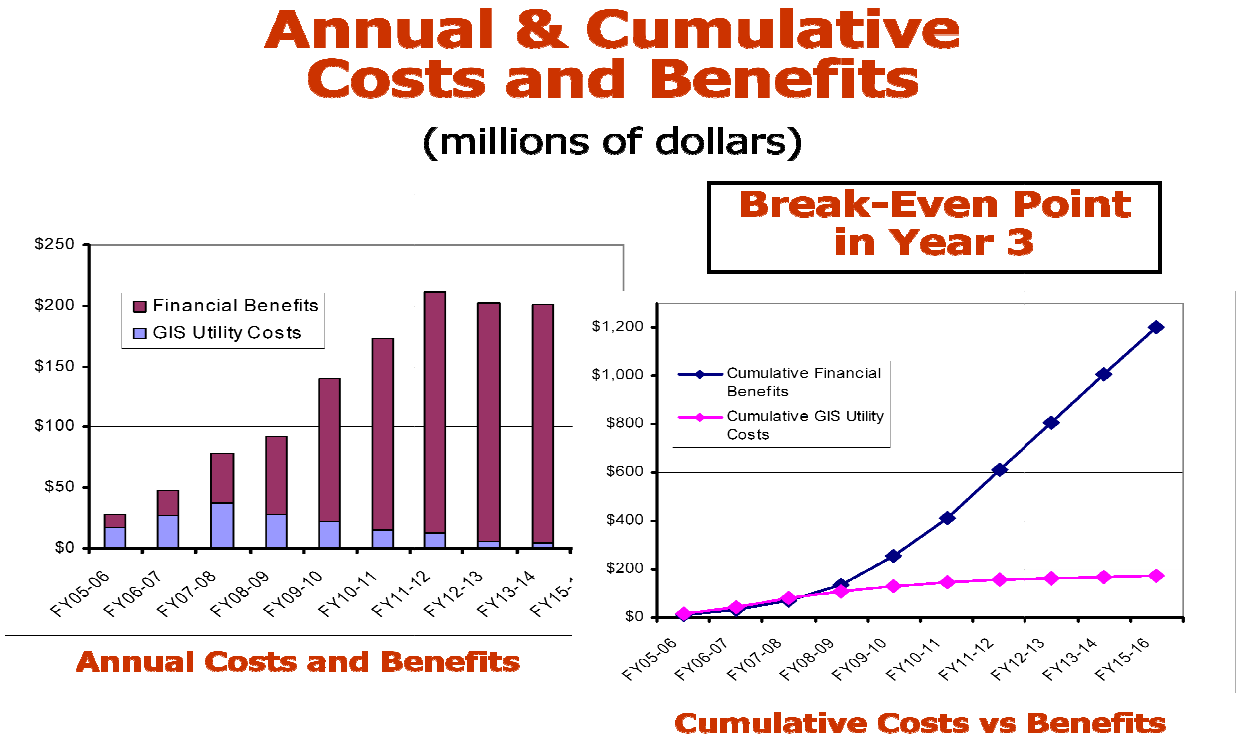
For a more detailed treatment, see Strategic and Business Plans, Executive Summary and ISDI brochure at http://gis.idaho.gov.

Business Case

No funds are available for a detailed business case. However, recently studies in other jurisdictions range from 2:1 to 23:1 (Table 1, Report of International Workshop on Spatial Data Infrastructures' Cost-Benefit / Return on Investment, January 2006). New Zealand reported $1.2B in efficiency gains in 2008 from the use of spatial data. Oregon's business case is as follows:

- Productivity improvements: over $185 million annually

- Cost savings and revenue enhancement: over $80 million in ten years
- Greatly increased opportunities for securing outside funds
- Benefits in quality of service, emergency preparedness, information security, and management of the environment and infrastructure
- Widespread collaboration and equalized access to information technology capabilities
- Stimulus for economic activity and public-private partnerships.



Core State funding is needed to attract additional funding and achieve target leverage (~5:1). Without adequate resources, Idaho will not achieve the cumulative benefits possible.

Budget

Ongoing Capital: $145,000
Ongoing Operating: $405,000
Program Total: **$550,000**

Cost Breakout:

Spatial Data Portal Services $200,000 (approx. 80% operating 20% capital)

Overall: Technical infrastructure build-out, development services, and portal administration for robust enterprise data and services at INSIDE Idaho, ISU GISTReC, and IGO, including mirroring, failover and load balancing.

This investment: The first year of stable funding will be used to help purchase failing equipment and purchase storage capacity, modernize the Web portal, transition portion of

collection to Web services, populate NSGIC state inventory, and develop capacity. This will be blended with other funding streams.

Framework (Data) Development $150,000 (operating)

This request seeds base map dataset development and stewardship implementation. Currently, Idaho is missing opportunities that require matching funds and opportunities that could provide high ROI for modest investment. The funds will be distributed based on evaluation of proposals using pre-agreed criteria by IGC (or IGC-EC when formed). Project coordination resides in IGO and is the responsibility of the Framework Coordinator. This will be blended with other funding streams.

Outreach & Communications $ 10,000 (operating)

This will fund the development of a detailed communications plan by consultant and begin funding its implementation, including communication development and maintenance (collaboration strategies, http://gis.idaho.gov Web site transition to state template), branding The Idaho Map (TIM), and developing and reproducing educational materials. It will also partially support partner travel on ISDI business. Part of these funds will be blended with other funding streams.

Regional Resource Centers $150,000 (approx. 30% capital, 70% operating)

Overall: Regional resource centers link local data development and maintenance activities with the statewide program. They also provide a coalescence of resources not achievable by any single jurisdiction, making GIS capabilities within reach of struggling governments.

This investment: Seed funding for up to two resource centers in Phase 1. Regions are currently developing proposals for their respective geographies. Anticipated capital investments will include servers and related software and accessories and GIS software licenses. The balance will help fund one full- or part-time person. From this will grow a full-fledged project plan. This will be blended with other funding streams, and this amount will increase as more centers are established, up to a total of six, with an estimated $510,000 total.

Training development (GISTReC) $ 40,000 (operating)
& trainee subsidies

These funds are targeted to training course development at ISU and deployment to all GIS education and training centers in Idaho. It also includes “scholarships” for professional development and some instructor support for off-site venues. This will likely be blended will other funding streams.

<u>Schedule, Time Constraints, Dependencies</u>

An overall schedule is published in the Business Plan. The schedule for each of these components is interrelated with other funding streams and opportunities. The Idaho Geospatial Office is managing the nested projects and initiatives and the IGC has oversight of the ISDI initiative.

<u>Risks</u>

For a more detailed treatment of risk management, see pages 56-63 of the Business Plan for Development and Deployment of Idaho’s Spatial Data Infrastructure, version 1.1.

Risks – Strategic

1) The ISDI initiative aligns with all ITRMC strategic plan goals and is the poster child for the collaboration goal.
2) Goals of ISDI are listed and elaborated clearly throughout the strategic and business plans, and all implementation initiatives are tuned to achieving those goals.
3) Monitoring and reporting is one of the ISDI goals. A form for progress reports is provided in the Business Plan, along with guidelines for quarterly reports by the GIO. Another form is provided for monitoring and reporting about each implementation initiative. These feeds from a MS Project file designed for the overall initiative, as well as a backbone for each of the implementation initiatives.
4) We have enlisted several executive champions in a variety of organizations. A majority of champions is fully committed to the ISDI and openly endorsed the project. Some agree with the need but they have yet to realize how ISDI will directly contribute to accomplishing many of the overarching goals of the State of Idaho and its citizens and thus have not made it their highest priority. A list of champions and endorsers follows:

    Mike Gwartney, CIO & Chair of ITRMC, Director of Department of Administration
    All ITRMC members (plans approval vote unanimous)
    Greg Zickau, Chief Technology Officer, Office of the CIO
    Robert McQuade, Ada County Assessor
    Dave Tuthill, former Director of the Department of Water Resources
    Dave Hoover, State Soil Scientist, Natural Resources Conservation Service
    Dennis Gribble, CIO, Idaho Power Company
    Donna L. Phillips, President, Northern Rockies Chapter, URISA
    Betty J. Munis, Director, Idaho Forest Products Commission
    Arthur C. Vailas, Ph.D., President, Idaho State University
    James S. Riley, President, Intermountain Forest Association
    Dennis Doan, Fire Chief, City of Boise
    David H. Bieter, Mayor, City of Boise
    Ken Harward, Executive Director, Association of Idaho Cities
5) Delayed delivery of ISDI has been anticipated due to lack of adequate resources. If established, this core, stable State funding will make the critical difference in roughly maintaining the aggressive five-year, four-phase implementation schedule. We do not anticipate any adverse impact to existing systems or business processes. Partial funding will ensure meaningful progress and reap benefits in all categories at modest levels and pacing.

Risks - Financial

Estimated cost of ISDI development and implementation is about $26.7M. About 40 percent ($10.7M) is already part of collaborating organizations' plans and budgets. The remaining $16M

is needed in new funding. This request represents the State's minimum portion of that remainder. The costs and benefits are documented in the Business Plan. Without expensive research and compilation, we cannot clearly define the ROI and payback, but Oregon's business case for a similar initiative can be used as an approximation or calibrated for Idaho. See graphs above.

Risks - Management

The GIO has extensive relevant project management experience, including nearly three successful years on a similar effort in Oregon. A new position, Framework Coordinator, will extend the management capacity of the Idaho Geospatial Office. Each implementation initiative requires a project plan identifying management approach and specifying personnel and processes, including communication. The Business Plan contains a complete work plan for ISDI. Specific milestones for each implementation initiative will be included in the project plan. Technology advances alleviate the need for the project teams to be in the same location.

Alternatives Analysis

1) Do nothing (or very little). Missing opportunities for greater efficiency, better service to citizens, better decisions, reduced duplication of effort, enhanced revenue and a plethora of other benefits is unacceptable to most everyone.
2) Establish a single GIS service center. Earlier efforts focused on this solution, which was implemented by a few states over a decade ago. While this was palatable in some places and met with some success, today's technology renders this solution archaic and difficult to justify in funding and human impact. It also puts distance between centralized staff and source stewards (local producers) in contravention to better practices. This approach is also less collaborative in nature.

Collaboration/Consolidation

Creating the SDI requires an organized approach to data development, data maintenance, and data access, all within a responsive and collaborative structure. Nearly all government agencies and numerous private organizations have a role in making Idaho's SDI a reality. Our challenge is in orchestrating everyone's role and making the results available for all to use. Our refrain is "Build it once, keep it current, and use it many times." We envision an Idaho SDI that is fully developed, maintained, and managed that supports the missions of Idaho organizations through easy access to high-quality geographic information and related services. By design, it will maximize the internet and related technologies to virtually integrate data statewide, distribute responsibility for data maintenance, and connect the community together regardless of geography. Most states and the federal government are engaged in collateral and nested visions and programs. The GIS community can't achieve the vision without significant support and collaboration. It requires the support and participation of all levels of government, as well as our private-sector partners. It requires raising awareness and fostering understanding of the real, substantial benefits to be gained and the methods in place to track them. It requires stable state funding to leverage and align other sources and engender confidence in its sustainability. It requires all of us working together.